Amendments to the Claims

This listing of the claims will replace all prior versions and listing of claims in the application:

Claim 1 (currently amended): An isolated polypeptide which comprises a subsequence: SRFEVW (SEQ ID NO: 22), wherein said peptide causes 50% bundled actin and inhibits actin depolymerization when polymerized in vitro with actin.

Claim 2 (amended): An isolated polypeptide in accordance with claim 1, comprising the formula: X_4-X_3-X_2-X_1-X_5-X_6, where

X_1 is -SRFEVW,

X_2 is WI,

X_3 is GIVRK,

X_4 is EN,

X_5 is PYL, and

X_6 is KK,

wherein the polypeptide comprises X_1 and at least one of X_2 or X_5, and optionally at least one of ~~X_2,~~ X_3, X_4, ~~X_5~~ and X_6, ~~and if any of X2~~ wherein when X_2, X_3, X_4, X_5 and X_6 are present, the amino acids are identical in their respective positions to those in

ENGIVRKWISRFEVWPYLKK (SEQ ID NO: 24)

~~as set forth in Figure 1B~~.

Claim 3 (currently amended): A peptide of claim 1 which is up to ~~100~~ 20 amino acids in length.

Claim 4 (currently amended): An isolated polypeptide of claim 1, wherein the peptide is at least 80% homologous with SEQ ID NOS: 2, 3 or 4~~a portion of native *Zea mays* protein sequence as set forth in GenBank Accession Number 1498382~~, and said homology is over the entire length of the peptide; or,

wherein said peptide causes 50% bundled actin and inhibits actin depolymerization when polymerized in vitro with actin at a molar ratio of 100 to 1; or,

wherein the peptide is at least 80% homologous with SEQ ID NOS: 2, 3 or 4~~a portion of native *Zea mays* protein sequence as set forth in GenBank Accession Number 1498382~~, and said homology is over the entire length of the peptide, and wherein said peptide causes actin bundling and inhibits actin depolymerization when polymerized in vitro with actin.

Claim 5 (currently amended): An isolated polypeptide having the sequence E-GI*---W------W (SEQ ID NO: 26), where, I* means I or V, - means any amino acid, wherein said peptide causes 50% bundled actin ~~bundling~~ and inhibits actin depolymerization.

Claim 6 (currently amended): An isolated polypeptide in accordance with claim 5, comprising a sequence:

EH*GIV*R*-W----- V* W (SEQ ID NO: 27), where H* means H or a conservative substitution therefore, V* means V or a conservative substitution therefore, and R* means R or a conservative substitution therefore, and - means any amino acid~~, wherein said peptide causes actin bundling and inhibits actin depolymerization~~.

Claim 7 (currently amended): An isolated polypeptide in accordance with claim 6, wherein the peptide causes 50% bundled actin and inhibits actin depolymerization when polymerized in vitro with actin.

Claim 8 (currently amended): An isolated polypeptide in accordance with claim 7, wherein the peptide is polymerized with actin at a molar ratio of peptide to actin of at least 100:1.

Claim 9 (currently amended): An isolated polypeptide of claim 5, wherein the sequence ~~comprises~~ is SEQ ID NO: 12.

Claim 10 (currently amended): An isolated polypeptide comprising at least 16 contiguous amino acids in accordance with the formula:

Gly-Ile-X_1-X_2-X_3-Trp-X_4-X_5-X_6-X_7-X_8-X_9-Trp-X_{10}-X_{11}-X_{12}

or a pharmaceutically acceptable salt thereof, wherein

X_1 is Ile,Val, or Leu;
X_2 is Arg, Lys, Asn, or Thr;
X_3 is Arg, Lys, Asn, or Asp;
X_4 is Ile, Asp, Asn, or Glu;
X_5 is Ser or Asp;
X_6 is Arg, Met, or Ala;
X_7 is Phe or Glu;
X_8 is Asp, Glu, Lys, Arg, or His;
X_9 is Val or Ile;
X_{10} is Pro or His;
X_{11} is Tyr or His; and
X_{12} is Leu or Thr;

wherein the ~~addition~~ administration to a patient's cell of said compound results in about 50% of bundled actin in a molar fraction of peptide to actin of at least 100 to 1.

Claim 11 (currently amended): A method for causing actin bundling and inhibition of actin depolymerization in a cell comprising the step of delivering to said cell an effective amount of an isolated peptide which comprises a subsequence: SRFEVW (SEQ ID NO: 22).

Claim 12 (currently amended): The method of claim 11, wherein the isolated peptide comprises at least 16 contiguous amino acids in accordance with the formula:

X_4-X_3-X_2-X_1-X_5-X_6, where

X_1 is SRFEVW,

X_2 is WI,

X_3 is GIVRK,

X_4 is EN,

X_5 is PYL, and

X_6 is KK,

wherein the isolated peptide comprises X_1 and optionally at least one of X_2, X_3, X_4, X_5 and X_6, and if any of X2, X_3, X_4, X_5 and X_6 are present, the amino acids are identical in their respective positions to those in ENGIVRKWISRFEVWPYLKK (SEQ ID NO: 24) and said peptide inhibits actin depolymerization when polymerized in vitro with actin ~~as set forth in Figure 1B~~.

Claim 13 (currently amended): A method of inhibiting growth of cells, where the method comprises administering to the cells an amount of the isolated peptide having the sequence ~~E-GI*--W-----W~~ of SEQ ID NO:26, ~~where, I* means I or V, - means any amino acid,~~ wherein said peptide causes actin bundling and inhibits actin depolymerization.

Claim 14 (currently amended): The method of claim 13, wherein said isolated peptide ~~comprising~~comprises a sequence:

EH*GIV*R*-W----- V* W (SEQ ID NO:27), where H* means H or a conservative substitution therefore, V* means V or a conservative substitution therefore, and R* means R or a conservative substitution therefore, and - means any amino acid, wherein said peptide causes actin bundling and inhibits actin depolymerization.

Claim 15 (currently amended): The method of claim 13, wherein said isolated peptide is SEQ ID NO: 10 or SEQ ID NO: 12.

Claim 16 (currently amended): The method of claim 13, wherein the administration of said isolated peptide results in about 50% of bundled actin in a molar fraction of peptide to actin of at least 100 to 1.

Claim 17 (previously presented): A polynucleotide sequence encoding a peptide of claim 5.

Claim 18 (previously presented): A vector containing the polynucleotide of claim 17.

Claim 19 (previously presented): A cell containing the vector of claim 18.